



MASTER Economics & Psychology

M1: Introduction to Economics

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Mid-term Exam 2022-2023

Tuesday October 11th, 3pm to 4.30pm

Part 1 [8/20]:

Define as precisely and concisely as possible and illustrate the following economic concepts:

Q1(2 points): Define income and price elasticities and graphically represent supply curves with three different price elasticities.

Q2 (2 points): Graphically represent two situations (before and after the implementation of a tax) and show the change in total surplus. Do taxes always generate deadweight losses?

Q3 (2 points): Do tariffs and import quotas cause comparable deadweight losses? Why are they sometimes considered as ‘bargaining instruments’?

Q4 (2 points): Why do we say that a merger & acquisition (M&A) offers a solution to externalities and under which conditions will this solution be enforceable?

Part 2 [12/20]:

Indicated in brackets the maximum number of points you can get for each question.

The French region of Brittany is well-known for its industrial production of pork meat. Let’s assume the market for pork meat in Brittany is composed of one consumer. Her demand is expressed as follows:

$$Q^D = 62 - 2p$$

The quantity of pork meat supplied by firms is expressed as follows:

$$Q^S = 2p - 2$$

1. Compute the equilibrium $E = (p^*, q^*)$ on this market. (0.5pt)

In order to improve conservation, pork meat producers use an important quantity of chemical substances called nitrites. Research shows that these nitrite inputs spread in the environment and favour the development of green algae on the costs and beaches of Brittany. The decomposition of such green algae produces gases which can be toxic to plants, animals, but also humans. Experts estimate that for every kg of pork meat produced, there is an extra cost of 8€ for society due to pollution and health issues.

2. Show that the social optimum is $E' = (p', q') = (20, 22)$. (1pt)

A first policy advisor recommends implementing a price floor $\bar{p} = 20$ on the pork meat market to attain the social optimum.

3. Represent this situation graphically. (1pt)
4. Compute the consumer surplus CS_1 , producer surplus PS_1 , total surplus TS_1 and the dead weight loss DWL_1 resulting from this policy. (2pts)
5. Is the market at the equilibrium? If not, compute the shortage or surplus S_1 on this market. (0.5pt)

A second policy advisor argues that a tax of 8€ levied on producers should be preferred to a price floor.

6. Represent this situation graphically. (1pt)
7. Compute the consumer surplus CS_2 , producer surplus PS_2 , total surplus TS_2 and the dead weight loss DWL_2 resulting from this policy. (2pts)
8. Is the market at the equilibrium? If not, compute the shortage or surplus S_2 on this market. (0.5pt)
9. The government wants to use the money collected through this tax to cover the depollution costs. Therefore, how much is the government willing to spend on depollution? (0.5pt)
10. Compute the amount of tax paid by consumers, and the amount of tax paid by producers. (1pts)
11. Which of the two policies would you recommend? Explain why. (2pts)